

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1-5. (canceled)

6. (currently amended) A mechanical chassis apparatus including a non-contact reading mechanism for a disc recording medium and a vibration preventing damper attached on a chassis member supported in a floating condition through the vibration preventing damper within a casing, comprising:

a resin portion at the vibration preventing damper forming a portion of the chassis member,

wherein an opening side end portion of a damper housing made of a resin material ~~of the damper housing~~ provided with a holder portion in a form of a container opened at one end for inserting a support shaft provided in the casing and an elastic wall portion for reducing floating movement of the support shaft due to elastic deformation in three-dimensional directions is fixed to said resin portion, and said vibration preventing damper is formed integrally with said chassis member without using mechanical fasteners,

wherein a through hole is formed in a vibration preventing damper forming portion in one of a metal portion of the chassis member and a metal chassis member, a resin hole edge covering portion for covering a hole edge of the through hole with both front and rear surfaces of the chassis member,

the opening side end portion of the damper housing is fixed to said resin hole edge covering portion on one side surface of the chassis member and a lid member made of a resin material is fixed to said resin hole edge covering portion on the other side surface of the chassis member.

7-13. (canceled)

14. (currently amended) A mechanical chassis apparatus according to claim 6, wherein the chassis member comprises a said metal portion in which said non-contact reading mechanism is provided and a said resin portion in which a said vibration preventing damper forming portion is included and is formed integrally with said metal portion.

15. (currently amended) A mechanical chassis apparatus including a non-contact reading mechanism for a disc recording medium and a vibration preventing damper attached on a chassis member supported in a floating condition through the vibration preventing damper within a casing, comprising:

a resin portion at the vibration preventing damper forming a portion of the chassis member,

wherein an opening side end portion of a damper housing made of a resin material ~~of the damper housing~~ provided with a holder portion in a form of a container opened at one end for inserting a support shaft provided in the casing and an elastic wall portion for reducing floating movement of the support shaft due to elastic deformation in three-dimensional directions is fixed to said resin portion, and said vibration preventing damper is formed integrally with said chassis member without using mechanical fasteners,

wherein the chassis member comprises a metal portion in which said non-contact reading mechanism is provided and a resin portion in which a vibration preventing damper forming portion is included and is formed integrally with said metal portion, and

wherein a through hole is provided in the vibration preventing damper forming portion of a resin portion of said chassis member,

the opening side end portion of the damper housing is fixed to a hole edge of the through hole on one side surface of the chassis member, and a lid member made of a resin material for closing the through hole is fixed to the hole edge of the through hole on the other side surface of the chassis member.

16. (currently amended) A mechanical chassis apparatus including a non-contact reading mechanism for a disc recording medium and a vibration preventing damper attached on a chassis member supported in a floating condition through the vibration preventing damper within a casing, comprising:

a resin portion at the vibration preventing damper forming a portion of the chassis member,

wherein an opening side end portion of a damper housing made of a resin material ~~of the damper housing~~ provided with a holder portion in a form of a container opened at one end for inserting a support shaft provided in the casing and an elastic wall portion for reducing floating movement of the support shaft due to elastic deformation in three-dimensional directions is fixed to said resin portion, and said vibration preventing damper is formed integrally with said chassis member without using mechanical fasteners,

wherein the chassis member comprises a metal portion in which said non-contact reading mechanism is provided and a resin portion in which a vibration preventing damper forming portion is included and is formed integrally with said metal portion, and

wherein a through hole through which the damper housing may be inserted is provided in the vibration preventing damper forming portion of a resin portion of said chassis member, an outward flange is provided on the opening side end portion of the damper housing,

under the condition that the one side surface of the outward flange comes in contact with a hole edge of the through hole, the damper housing is fixed to said chassis member and a lid member made of a resin material for closing the opening side end portion of the damper housing is fixed to the other side surface of the outward flange.

17-22. (canceled)

23. (previously presented) A vibration preventing damper and chassis assembly, comprising:

a chassis member; and

a vibration preventing damper attached to the chassis member as an integral construction without mechanical fasteners,

wherein the chassis member is fabricated from metal and has a through hole formed therethrough and the vibration preventing damper includes a damper housing having an elastic wall portion formed with an internal agitating sleeve and fabricated from a thermoplastic elastomer, a resin portion fabricated from resin and integrally connected to the chassis member forming a ring covering at least an inner periphery of the through hole, a lid member fabricated from resin and a viscous fluid contained in the vibration preventing damper and in contact with the internal agitating sleeve, the elastic wall portion is integrally connected to the resin portion on one side of the chassis member and the lid member is integrally connected to the resin portion on an opposite side of the chassis member in a manner such that the elastic wall portion and the lid member are isolated from contact with the chassis member.

24. (canceled)

25. (currently amended) A mechanical chassis apparatus comprising:

a non-contact reading mechanism for a disc recording medium and a vibration preventing damper which are attached on a chassis member supported in a floating condition through the vibration preventing damper within a casing,

wherein the vibration preventing damper comprises:

a damper housing in a form of a container opened at one end, the damper housing being provided with a holder portion for holding a support shaft provided in the casing by inserting the support shaft into the holder portion and an elastic wall portion for reducing floating movement of the support shaft due to elastic deformation in three-dimensional directions; and

a lid fixed to an opening side end portion of the damper housing to enclose the damper housing,

wherein the chassis member comprises a vibration preventing damper forming portion made of resin, and

wherein the vibration preventing damper forming portion serves as the lid so that the vibration preventing damper is formed integrally with the chassis member.

26. (currently amended) A mechanical chassis apparatus according to claim 25, wherein the damper housing further comprises a circumferential wall portion made of resin.

27. (currently amended) A vibration preventing damper forming method for supporting in a vibration proof manner a mechanical chassis apparatus provided with a non-contact reading mechanism for a disc recording medium in a floating manner within a casing, the a vibration preventing damper being formed integrally with the casing or the mechanical chassis apparatus, characterized by comprising the steps of:

preparing a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft provided in one of the casing and the mechanical chassis apparatus, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material, and preparing a cover plate formed of a resin material; and

regarding the other of the casing and the mechanical chassis apparatus, forming a through hole that passes through the plate thickness in a metal portion that forms the vibration preventing damper and forming an annular resin portion that covers hole edges of the through hole at both front and rear surfaces,

characterized in that ~~the~~an opening of the damper housing is fixed to the annular resin portion on one surface side of the other of the casing and the mechanical chassis apparatus, and the cover plate is fixed to the annular resin portion of the other surface side, thereby closing an inner portion space that is formed by both the damper housing and the through hole, and integrally forming the vibration preventing damper with the casing or the mechanical chassis apparatus.

28. (currently amended) A mechanical chassis apparatus comprising:

a chassis member having a non-contact reading mechanism for a disc recording medium, a metal plate, in which a through hole is formed in a vibration preventing damper forming portion, and an annular resin portion that covers a hole inside and hole edges of the through hole at both front and rear surfaces;

a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft that is provided projecting into a casing that houses the chassis member, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material; and

a cover plate formed of a resin material,

characterized in that ~~the~~ a vibration preventing damper, in which an inner portion space of the damper housing formed by an inner circumferential surface of the annular resin portion is closed by the cover plate, is formed integrally with the chassis member by fixing the opening side end portion of the damper housing to the annular resin portion on one surface side of the chassis member, and fixing the cover plate to the annular resin portion in another surface side of the chassis member.

29. (currently amended) A vibration preventing damper forming method for supporting in a vibration proof manner a mechanical chassis apparatus provided with a non-contact reading mechanism for a disc recording medium in a floating manner within a casing, ~~the~~ a vibration preventing damper being formed integrally with the casing or the mechanical chassis apparatus, characterized by comprising the steps of:

preparing a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft provided in one of the casing and the mechanical chassis apparatus, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material, and preparing a cover plate formed of a resin material; and

regarding the other of the casing and the mechanical chassis apparatus, forming a through hole that passes through the plate thickness of a portion that forms the vibration preventing damper,

characterized in that ~~the~~ an opening of the damper housing is fixed to a hole edge of the through hole on one surface side of the other of the casing and the mechanical chassis apparatus, and the cover plate is fixed to a hole edge of the through hole on another surface side, thereby closing an inner portion space that is formed by both the damper housing and the

through hole, and integrally forming the vibration preventing damper with the casing or the mechanical chassis apparatus.

30. (currently amended) A mechanical chassis apparatus comprising:

a chassis member having a non-contact reading mechanism for a disc recording medium and a resin plate, in which a through hole is formed, in a vibration preventing damper forming portion;

a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft that is provided projecting into a casing that houses the chassis member, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material; and

a cover plate formed of a resin material,

characterized in that ~~the~~ a vibration preventing damper, in which an inner portion space of the damper housing formed by the through hole is closed by the cover plate, is formed integrally with the chassis member by fixing the opening side end portion of the damper housing to a hole edge of the through hole on one surface side of the resin plate of the chassis member, and fixing the cover plate to a hole edge of the through hole on another surface side of the resin plate of the chassis member.

31. (currently amended) A vibration preventing damper forming method for supporting in a vibration proof manner a mechanical chassis apparatus provided with a non-contact reading mechanism for a disc recording medium in a floating manner within a casing, the vibration preventing damper being formed integrally with the casing or the mechanical chassis apparatus, characterized by comprising the steps of:

preparing a damper housing in the form of a container opened at one end, the damper housing having a holder portion for holding a support shaft provided in one of the casing and the mechanical chassis apparatus, an elastic wall portion that is capable of reducing a floating movement of the support shaft due to elastic deformation in three-dimensional directions, and an opening side end portion formed of a resin material, and preparing a cover plate formed of a resin material; and

regarding the other of the casing and the mechanical chassis apparatus, forming a through hole that passes through ~~the~~ a plate thickness of a portion that forms the vibration preventing damper,

characterized in that ~~the~~ an opening of the damper housing is fixed to a hole edge of the through hole through an ultrasonic wave heat bonding on one surface side, and the cover plate is fixed to a hole edge of the through hole on another surface side, thereby closing an inner portion space that is formed by both the damper housing and the through hole, and integrally forming the vibration preventing damper with the casing or the mechanical chassis apparatus.

32. (previously presented) A mechanical chassis apparatus according to any one of claim 28 or claim 30, wherein a through hole for communicating air between an inside and an outside of the vibration preventing damper is formed in any portion of the vibration preventing damper forming portion in at least one of the vibration preventing damper and the chassis member.

33. (currently amended) A mechanical chassis apparatus according to any one of claim 28 or claim 30, wherein the holder portion of the damper housing is formed as a bottomed agitating shaft portion for holding the ~~inserted~~ support shaft provided in the casing and viscous fluid for giving an agitating resistance due to viscous fluidization to the agitating shaft portion that moves in accordance with the movement of the support shaft is provided within an interior of the vibration preventing damper.

34. (currently amended) A mechanical chassis apparatus according to any one of claim 28 or claim 30, wherein the chassis member comprises a metal portion in which said non-contact reading mechanism is provided and a resin portion in which a the vibration preventing damper forming portion is included and is formed integrally with said metal portion.